

## WHAT IS CLAIMED IS:

1. A sample drying device comprising:  
a channel for a sample flowing in said channel; and  
a sample drying area having an opening communicating with said channel,  
wherein said sample drying area comprises a fine channel narrower than  
5 said channel.
2. A sample drying device comprising:  
a main channel for a sample flowing in said main channel;  
a plurality of side channels branched from said main channel; and  
a sample drying area communicating with said side channels,  
5 wherein said sample drying area has a fine channel narrower than said  
side channels.
3. The sample drying device as claimed in Claim 2,  
wherein said sample contains multiple components and said main channel  
comprises a separating portion to separate said components.
4. The sample drying device as claimed in any of Claims 1 to 3,  
wherein said sample drying area comprises a plurality of protrusions  
separated each other.
5. The sample drying device as claimed in Claim 4,  
wherein said drying area has a shape so that the top of said sample  
drying area projects from said opening.

6. The sample drying device as claimed in any of Claims 1 to 5,  
wherein said sample drying area is filled with multiple particles.
7. The sample drying device as claimed in any of Claims 1 to 6,  
wherein said sample drying area is filled with a porous material.
8. The sample drying device as claimed in any of Claims 1 to 7,  
wherein said sample drying area has a lid comprising a fine channel  
communicating with said outside of said sample drying device.
9. The sample drying device as claimed in any of Claims 1 to 8,  
wherein said sample drying device comprises a temperature controller  
for controlling a temperature of said sample drying area.
10. A mass spectrometer comprising a sample drying area included in said  
sample drying device as claimed in any of Claims 1 to 9, as a sample  
holder.
11. A mass spectrometry system comprising:  
separating unit separating components in a biological sample by their  
molecular sizes and properties;  
pretreatment unit pretreating said sample separated by said separating  
5 unit including enzymatic digestion;  
drying unit drying the pretreated sample components; and  
mass spectrometry unit conducting mass spectrometry for the dried  
sample,  
wherein said drying unit comprises said sample drying device as claimed

10 in any of Claims 1 to 9.

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